



QuickCalcs

Online Calculators for Scientists

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Outlier Results

This calculator performed Grubbs' test, also called the ESD method (extreme studentized deviate), to determine whether the most extreme value in the list you entered is a significant outlier from the rest. Unlike some other outlier tests, Grubbs' test only asks whether that one value is an outlier. It is not appropriate to then remove that outlier, and run the test again. Learn more about the [principles of outlier detection](#) and exactly how [this test is calculated](#).

Descriptive Statistics

Mean: 0.04771

SD: 0.10620

of values: 69

Outlier detected? Yes

Significance level: 0.01 (two-sided)

Critical value of Z: 3.61605675156

Your data

Row	Value	Z	Significant Outlier?
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1	0.064	0.15338	
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2	0.021	0.25150	
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3	0.069	0.20046	
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4	0.010	0.35507	
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5	0.016	0.29858	
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6	0.009	0.36449	
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7	0.017	0.28916	
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8	0.003	0.42098	
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9	0.007	0.38332	
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10	0.062	0.13455	
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11	0.032	0.14792	
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12	0.017	0.28916	
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13	0.012	0.33624	
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14	0.025	0.21384	
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15	0.011	0.34566	
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16	0.009	0.36449	
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17	0.018	0.27975
18	0.017	0.28916
19	0.003	0.42098
20	0.035	0.11968
21	0.007	0.38332
22	0.015	0.30799
23	0.013	0.32683
24	0.003	0.42098
25	0.008	0.37390
26	0.009	0.36449
27	0.008	0.37390
28	0.024	0.22325
29	0.015	0.30799
30	0.120	0.68067
31	0.018	0.27975
32	0.013	0.32683
33	0.015	0.30799
34	0.011	0.34566
35	0.020	0.26091
36	0.006	0.39274
37	0.010	0.35507
38	0.008	0.37390
39	0.016	0.29858
40	0.016	0.29858
41	0.014	0.31741
42	0.003	0.42098
43	0.013	0.32683
44	0.021	0.25150
45	0.012	0.33624
46	0.013	0.32683
47	0.011	0.34566
48	0.014	0.31741
49	0.003	0.42098
50	0.003	0.42098
51	0.003	0.42098
52	0.004	0.41157
53	0.005	0.40215
54		

	0.023	0.23267
55	0.003	0.42098
56	0.083	0.33228
57	0.079	0.29462
58	0.790	6.98928 Significant outlier. P < 0.01
59	0.083	0.33228
60	0.097	0.46411
61	0.076	0.26637
62	0.068	0.19105
63	0.070	0.20988
64	0.076	0.26637
65	0.098	0.47352
66	0.085	0.35112
67	0.350	2.84631
68	0.190	1.33978
69	0.190	1.33978

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